



FM07M

7-inch Vehicle Mount Computer

ARM A53 Quad Core 2.0GHz



Quick Start Guide

Version 1.0
Document Part No. 9152111I109W

Please read these instructions carefully before using this product, and save this manual for future use.

Content

Preface	2
1: Introduction	6
1.1 Introduction	6
1.2 Package Contents.....	6
2: Components	7
2.1 Front View.....	7
2.2 Side Views	8
2.3 Rear View	8
2.4 Top and Bottom View.....	9
3: System Hardware	10
3.1 Central Processing Unit	10
3.2 Input and Output Connectors	10
3.3 System Memory	10
3.4 Audio Interface.....	10
3.5 WLAN	10
3.6 WWAN (Optional)	10
4: Power Cable Installation	10
4.1 Wiring the Power Cable	10
4.2 Connecting the Power Cable for Testing	11
4.3 Connecting the Power Cable for Installation On the Vehicle.....	11
4.4 Vehicle DC Power Supply	13
5: Power Control	13
5.1 Power Button	13
5.2 Ignition Control.....	13
6: External Vehicle Remote Antenna Installation	14
7: Winset	14
7.1 System Information	14
7.2 Ignition Control.....	15
7.3 DIDO Controller	15
7.4 Function Buttons	16
8: Vehicle Mounting	17
8.1 Vehicle Mount Instruction.....	17
8.2 VESA Mount Installation	17
8.3 RAM Mount Installation.....	17
8.3.1 Mounting 1 – No Drill Solution	18
8.3.2 Mounting 2 – Drill Solution.....	19
8.3.3 RAM Mount Assembly	20
8.3.4 Mounting 3 – Keyboard Mounting Installation.....	20
Appendix A: Product Specifications	22

Preface

Copyright

No part of this manual may be reproduced, copied, translated, or transmitted in any form or any means, electronic or mechanical, for any purpose, without the written permission of Winmate Inc.

Trademarks

Brand and product names are trademarks or registered trademarks of their respective owners.

Disclaimer

Winmate Inc. reserves the right to make any product changes without notice, including circuits and/or software described or contained in this manual in order to improve design and/or performance. Winmate Inc. assumes no responsibility or liability for the use of the described product(s), conveys no license or title under any patent, copyright, or mask work rights to these products, and makes no representations or warranties that these products are free from patent, copyright, or mask work right infringement, unless otherwise specified. Applications that are described in this guide are for illustration purposes only. Winmate Inc. makes no representation or warranty that such application will be suitable for the specified use without further testing or modification.

Warranty

Winmate Inc. warrants that each of its products is free from material and workmanship defect for a period of one year starting from the invoice date. If the customer discovers a defect, Winmate Inc. will, at its option, repair or replace the defective product at no charge to the customer, provided it is returned during the warranty period, with transportation charges prepaid. The returned product must be properly packaged in its original packaging to obtain warranty service.

Advisory Conventions

Four types of advisories are used throughout the user manual to provide helpful information or to alert you to the potential for hardware damage or personal injury. These are Notes, Important, Cautions, and Warnings. The following is an example of each type of advisory.



Note:

A note is used to emphasize helpful information



Important:

An important note indicates information that is important for you to know.



Caution/ Attention

A Caution alert indicates potential damage to hardware and explains how to avoid the potential problem.

Une alerte d'attention indique un dommage possible à l'équipement et explique comment éviter le problème potentiel.



Warning!/ Avertissement!

An Electrical Shock Warning indicates the potential harm from electrical hazards and how to avoid the potential problem.

Un Avertissement de Choc Électrique indique le potentiel de chocs sur des emplacements électriques et comment éviter ces problèmes.

FCC Statement



This device complies with part 15 FCC rules.

Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received including interference that may cause undesired operation

This equipment has been tested and found to comply with the limits for a class "B" digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

CE Notice (European Union)



Electromagnetic Compatibility Directive (2014/30/EU)

- EN55024: 2010/ A1: 2015
 - IEC61000-4-2: 2009
 - IEC61000-4-3: 2006+A1: 2007+A2: 2010
 - IEC61000-4-4: 2012
 - IEC61000-4-5: 2014
 - IEC61000-4-6: 2014
 - IEC61000-4-8: 2010
 - IEC61000-4-11: 2004
- EN55032: 2012/AC:2013
- EN61000-3-2:2014
- EN61000-3-3:2013

Low Voltage Directive (2014/35/EU)

- EN 60950-1:2006/A11:2009/A1:2010/A12:2011/ A2:2013

This equipment is in conformity with the requirement of the following EU legislations and harmonized standards. Product also complies with the Council directions.

Read Me First



Attention: Pour réduire le risque d'incendie ou de choc électrique ne pas exposer l'appareil à la pluie ou à l'humidité. VERIFIER que le cordon électrique est la prise murale pour un delai d'inaktivite prolongé. Pour arrêter complètement l'alimentation de l'appareil, débranchez le cordon d'alimentation de la prise AC. N'enlever ni le capot arrière ni les pièces internes de l'appareil. Contactez un personnel qualifié si nécessaire.



SA1965

Électrique Avertissement
Utilisé pour les instructions destinés à alerter l'utilisateur d'un CHOC ÉLECTRIQUE mortel ou de blessure grave en cas d'utilisation incorrecte de l'unité.



SA1966

Avertissement Utilisé pour les instructions destinés à alerter l'utilisateur d'un risque mortel ou de blessure grave en cas d'utilisation incorrecte de l'unité.



Attention: Pour réduire le risque d'incendie ou de choc électrique ne pas exposer l'appareil à la pluie ou à l'humidité FAIRE le cordon électrique est DÉBRANCHÉ DE LA PRISE MURALE DANS UN DELAI DE PROLONGER INACTIVITÉ. De se désengager totalement LE POUVOIR DE L'UNITE, S'IL VOUS PLAÎT DEBRANCHER LE CORDON D'ALIMENTATION DE LA PRISE AC. NE PAS Romove le capot arrière, pas de PIÈCES À L'INTÉRIEUR. Contactez un personnel qualifié S'il faut le réparer.



SA1965

Électrique Avertissement
Sert aux instructions destinées à alerter l'utilisateur d'un CHOC ÉLECTRIQUE mortel ou de blessure grave en cas d'utilisation incorrecte de l'unité.



SA1966

Avertissement Sert aux instructions destinées à alerter l'utilisateur d'un risque mortel ou de blessure grave en cas d'utilisation incorrecte de l'unité.

Informations de sécurité (FR)

Suivez et respectez tous les avertissements et instructions figurant sur l'écran. Pour votre sécurité, s'il vous plaît lire toutes les consignes de sécurité et de fonctionnement avant d'utiliser le device. Gardez ce manuel pour référence future.

1. Lire avec attention toutes les recommandations et précautions d'emploi avant d'utiliser ce produit.
2. Veuillez conserver ces recommandations et précautions pour référence future.
3. Lire et comprendre tous les avertissements énumérés dans les précautions d'emploi.
4. Suivre toutes les précautions d'emploi pour utiliser ce produit.
5. Utiliser exclusivement un chiffon sec pour nettoyer ce produit.
6. Ne pas placer le produit près de toute source de chaleur telle que radiateurs, arrivées d'air chaud, fourneaux ou autres appareils générant de la chaleur (inclus les amplificateurs producteurs de chaleur).
7. Ne pas négliger la sécurité que procure un branchement polarisé ou avec raccordement à la terre. Un branchement polarisé comprend deux fiches dont l'une est plus large que l'autre. Un branchement à la terre comprend deux fiches plus une troisième reliée à la terre. Si la fiche secteur fournie ne s'insère pas dans votre prise de courant, consulter un 'électricien afin de remplacer votre prise obsolète.
8. Protéger le cordon d'alimentation de tout écrasement ou pincement, particulièrement au

niveau des fiches, des réceptacles utilisés et à l'endroit de sortie de l'appareil. Ne pas casser la fiche de terre du cordon d'alimentation.

9. Utiliser uniquement les accessoires spécifiés par le constructeur.
10. Utilisez seulement des accessoires spécifiés par le manufacturier ou vendus avec le produit.
11. Débrancher cet appareil lors d'orages ou s'il n'est pas utilisé pendant une longue période.
12. Faire exécuter le service par du personnel qualifié. Une intervention technique est requise lorsque l'appareil a été endommagé ou n'opère pas normalement.



Safety Information (EN)

Follow and adhere to all warnings and instructions on the screen. For your safety, please read all safety and operating instructions before using the device. Keep this manual for future reference.

1. Carefully read all recommendations and precautions for use before using this product.
2. Retain all recommendations and precautions for future reference as necessary.
3. Read and be sure to understand all warnings listed in the precautions.
4. Follow all operating precautions when using this product.
5. Use only a dry cloth to clean this product.
6. Do not place the product near any heat sources such as radiators, warm air intakes, stoves or other heat-generating devices (including amplifiers or other heat producing equipment).
7. Do not disregard the safety that a polarized or grounded connection can provide. A polarized connection consists of two plugs, one of which is larger than the other. A grounded connection has two blades and a third one that is grounded. If the main plug provided cannot be inserted into your outlet, consult an electrician to replace your obsolete outlet.
8. Protect the power cord from being crushed or pinched, particularly in the area of the plugs, any receptacles used, and the point of exit from the apparatus. Do not break off the ground pin of the power cord.
9. Use only accessories specified by the manufacturer.
10. Use only with accessories specified by the manufacturer or sold with the product.
11. Unplug this apparatus during lightning storms or when it is not being used for long periods.
12. Refer all servicing to qualified service personnel. A technical intervention is required when the apparatus has been damaged in any way or does not operate normally.



General Guideline

It is recommended to reboot the device when some functions are defect or inactive. If it still can't solve the problems, please contact your dealer or agent.

About This Guide

This User Guide provides instruction for the system administrator to follow when configuring and using the FM07M Vehicle Mount Computer.



Note:

Display images shown may vary slightly from actual display. Information in this manual is subject to change without prior notification.

1: Introduction

This chapter contains details of FM07M Vehicle Mount Computer, lists supplied accessories and shows components.

1.1 Introduction

The FM07M Vehicle Computer runs on an ARM A53 Quad Core 2.0GHz processor and supports Android 11 operating system. The FM07M features projected capacitive touch screen with 1024 x 600pixel resolution. The FM07M delivers flexibility and mobility in a vehicle mounted computer form factor. FM07M is designed to be mounted on the vehicle and supports 9 to 24V DC wide power input with ignition.



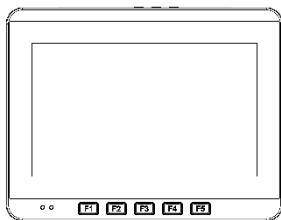
Note:

Contact our technical support for information on the latest firmware upgrade for your device.

1.2 Package Contents

Standard

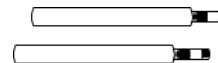
Before using this device, make sure that all the items listed below are present in your package:



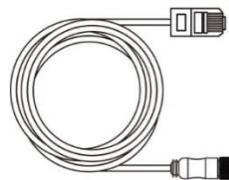
FM07M Computer
Varies by product specifications



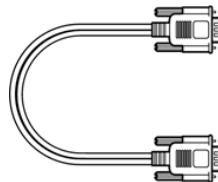
User Guide
Part No. 9152111I109M



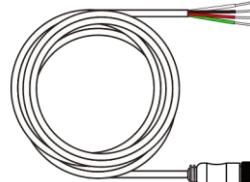
WLAN/BT Antenna x 2
Part No. 397SM000000S



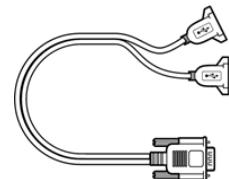
M12 LAN Cable, 1.8m
Part No.94I0120080K0



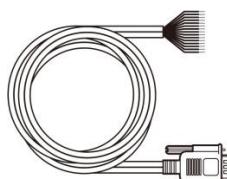
RS-232 Cable, 1.8m
Part No. 94G4094090K1



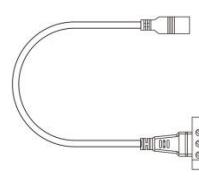
M12 Power Cable, 1.8m
Part No.94J004L040K1



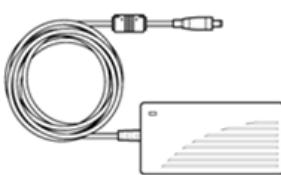
USB Cable, 0.3m
Part No.9483098080K0



CANBus Cable, 1.8m
Part No. 94E215L120K1



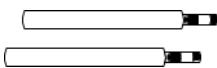
Power Converter Cable
Part No.94J602G030K2



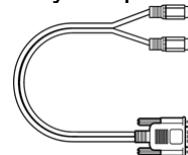
Power Adapter
Part No. 922D050W12VA

Optional

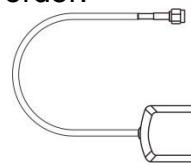
The following accessories may be included in your package based on your order:



WWAN Antenna x 2
Part No.397SM000000Q



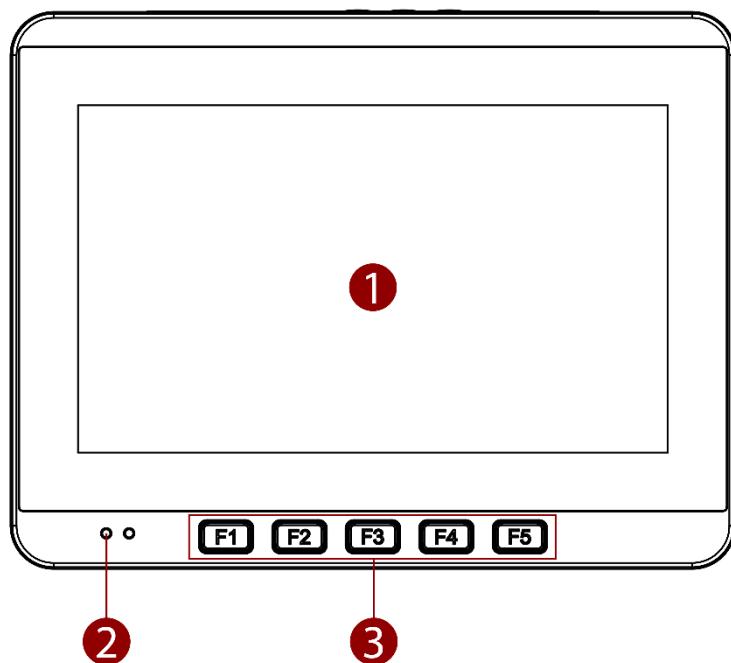
Audio Cable, 0.3m
Part No.94E215R060K0



GPS Antenna, 3m
Part No.397SM000000G

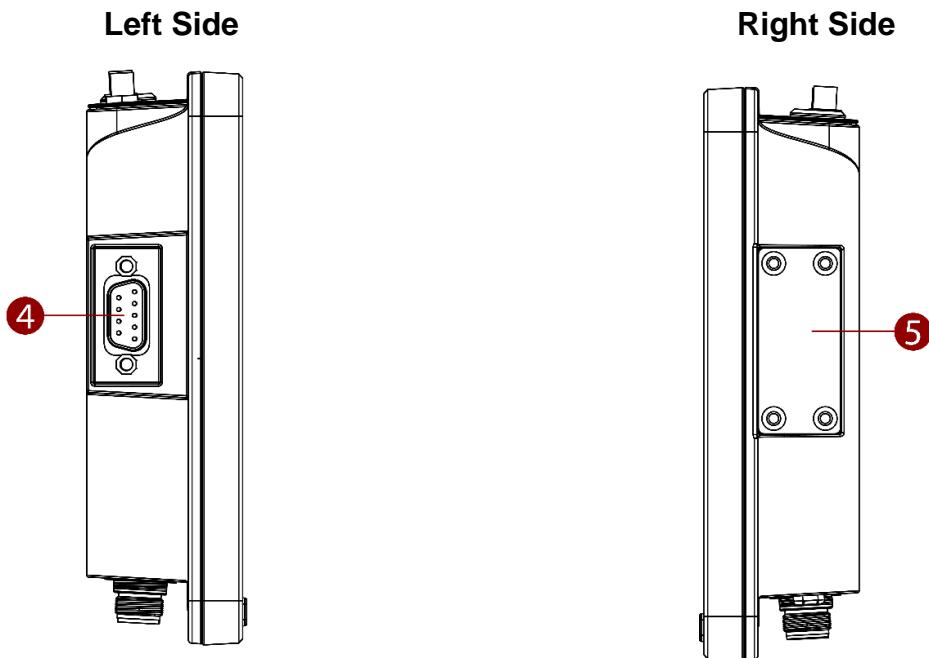
2: Components

2.1 Front View



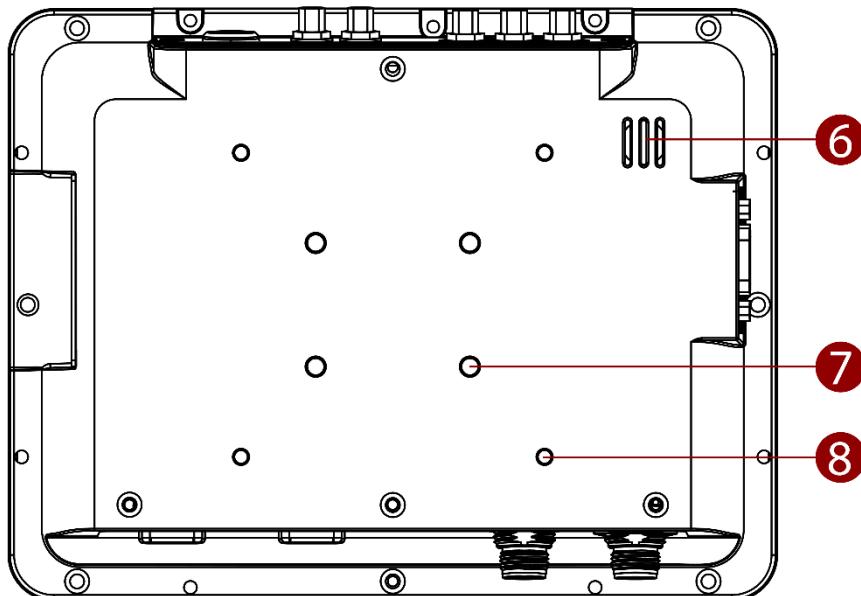
No	Item	Description
1	7-inch Touch Screen	Acts as one of the inputs for the device
2	LED Indicators	Power LED indicator <i>On: Power is on</i> <i>Off: Power is off</i>
3	Function Keys	5 programmable function keys that can be configured by Win-Set® Utility

2.2 Side Views



No	Item	Description
4	USB Connector	USB Connector (DB9) that supports a connection of two USB devices. It also accepts a dongle cable with a USB host port and a USB Client port.
5	SIM Card Slot (Optional)	SIM card slot under secured cover with 4 screws.
	SD Card Slot	MicroSD card slot under secured cover with 4 screws.
	Micro USB	Micro USB port under secured cover with 4 screws.

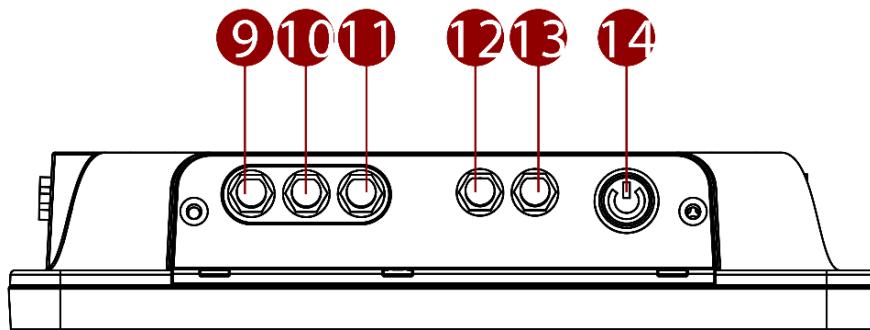
2.3 Rear View



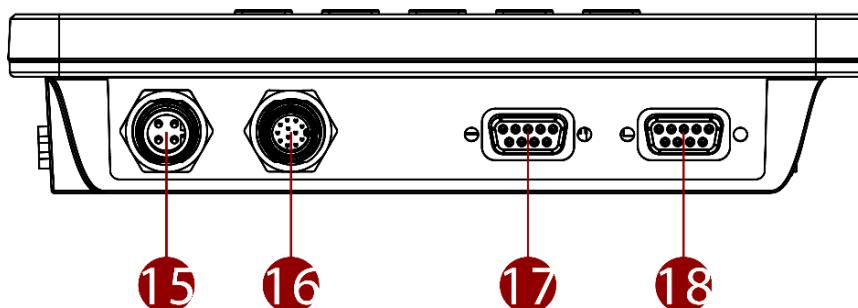
No	Item	Description
6	Speaker	Emits sound
7	RAM Mount	RAM base dimensions: 38.1 x 30 mm
8	VESA Mount	VESA dimensions : 75 x 75 mm

2.4 Top and Bottom View

Top Side



Bottom Side



No	Item	Description
9	LTE Main Antenna (Optional)	For LTE Main antenna.
10	GPS Antenna (Optional)	For GPS antenna.
11	LTE Aux Antenna	For LTE Aux antenna.
12	BT Antenna	For BT antenna.
13	WLAN Antenna	For WLAN antenna.
14	Power Button	Press power button to start the system.
15	Power Input Connector	9-24 V DC with Ignition control.
16	LAN	Gigabit Ethernet connector (M12 type) connects to an access point that provides connection to network
17	DIDO, CANBus	DIDO and CANBus (DB15) connector allows direct linking into vehicle, enable access to wide range of vehicle data
18	RS-232	RS-232 (DB9) connects to a device such as printer or scanner

3: System Hardware

3.1 Central Processing Unit

The FM07M Vehicle Computer runs on an ARM A53 Quad Core 2.0GHz processor and supports Android 11 operating system.

3.2 Input and Output Connectors

The FM07M device supports the following I/O connectors:

- Gigabit Ethernet LAN (M12 type)
- 1 x Power input 9-24V DC with ignition control (M12 type)
- 1 x RS-232
- 1 x CANBus/ Digital IO
- 2 x USB
- 1 x SIM card slot (optional)
- 1 x SD card slot
- 1 x Micro USB OTG

3.3 System Memory

The main system memory is 4GB LPDDR4.

3.4 Audio Interface

Your device is equipped with one speaker which is located on the back cover.

3.5 WLAN

Your device has an WLAN network card that can be used with internal or external antennas.

3.6 WWAN (Optional)

Using a SIM card for network connection, your device supports Wireless Wide Area Networking (WWAN).

4: Power Cable Installation

4.1 Wiring the Power Cable



WARNING!/ AVERTISSEMENT!

This procedure requires a trained service personnel only, improper installation can cause serious damage to the vehicle or the device.

Cette procédure nécessite un personnel de maintenance qualifié uniquement, une mauvaise installation peut causer des dommages importants au véhicule ou le dispositif.

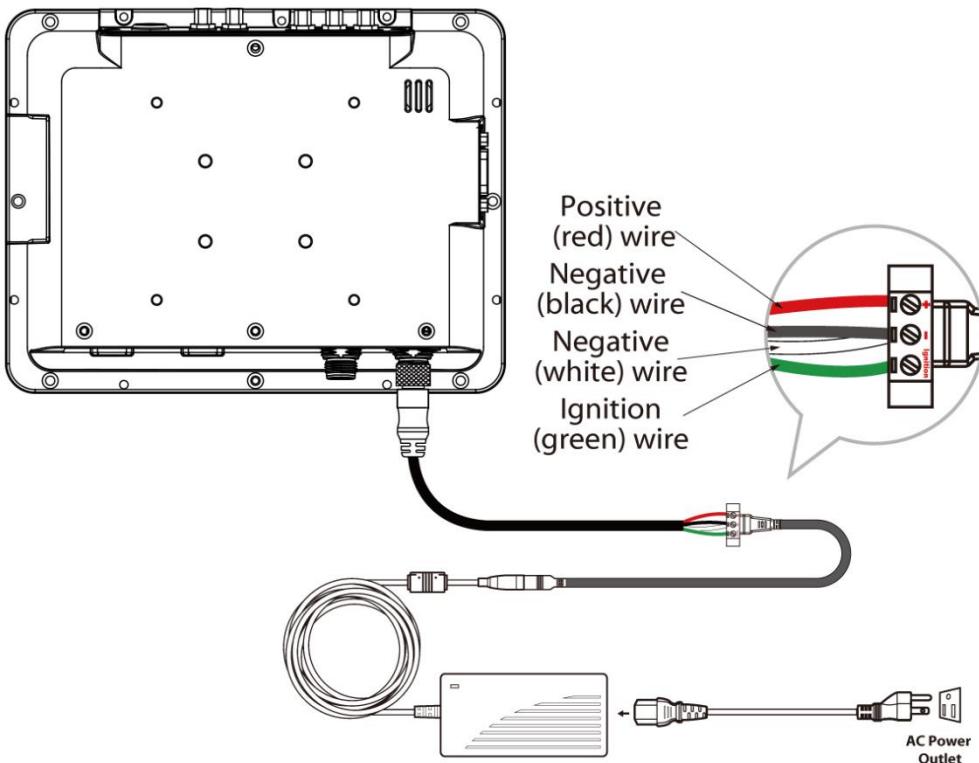
4.2 Connecting the Power Cable for Testing



IMPORTANT:

It is highly recommended to purchase the power cable for testing purpose.

Wiring Instruction



1. Place the device on the vehicle dock and make sure the device is Off.
2. Connect the M12 power cable to FM07M by aligning the connector pins and then push it, twist to fasten the connection.
3. Connect the AC plug to the electrical outlet.
4. Press the On button, located on the top side of the FM07M.
5. The device is ready for testing.

4.3 Connecting the Power Cable for Installation On the Vehicle

WARNING!/ AVERTISSEMENT!



This power cable should only be used on the 12 to 24 Volt forklifts.

Ce câble d'alimentation ne doit être utilisé que sur les chariots élévateurs de 12 à 24 volts.

WARNING!/ AVERTISSEMENT!



Select a mounting location and make sure it is not located on the outside the vehicle.

Sélectionnez un emplacement de montage et assurez-vous qu'il ne se trouve pas à l'extérieur du véhicule.

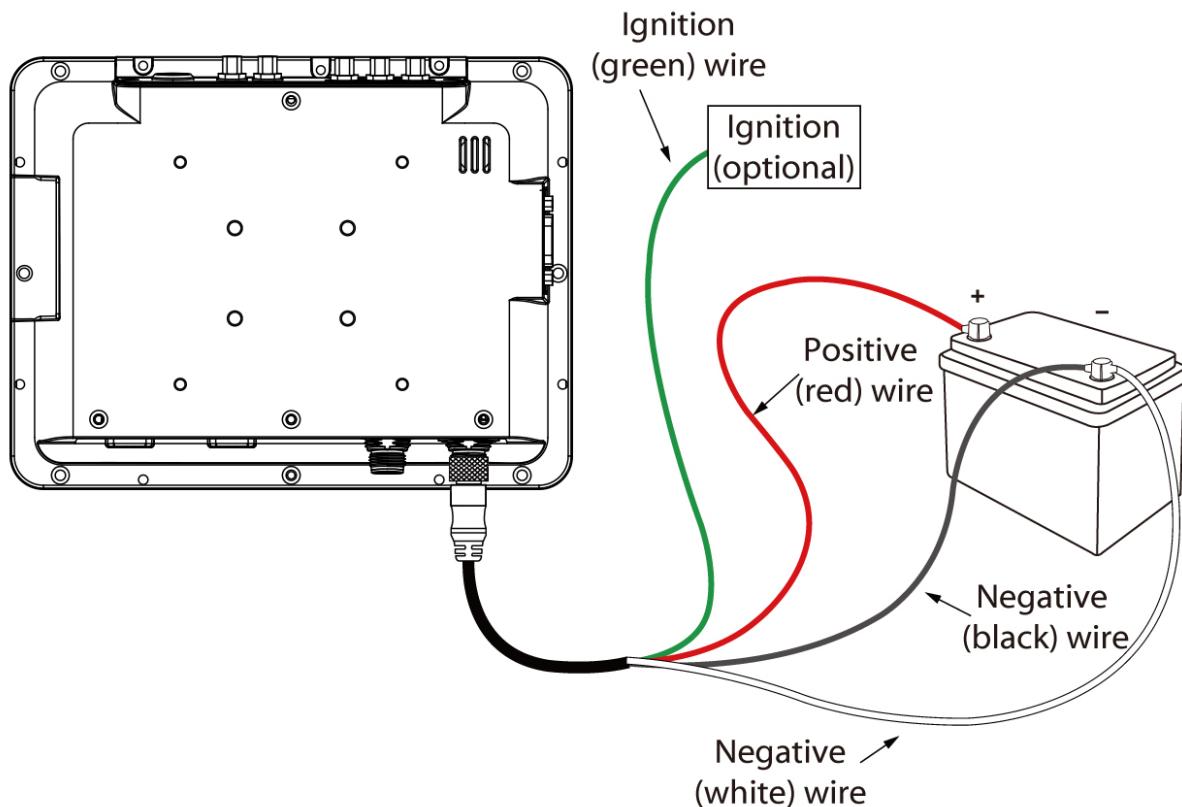
WARNING!/ AVERTISSEMENT!



Do not perform the installation on a moving or live electric forklift.

Ne pas effectuer l'installation sur un mobile ou un chariot élévateur électrique sous tension.

Wiring Instruction



1. Remove the vehicle battery before connecting the power cable.
2. Place **Red** (VCC +) and **Green** (ignition) wires as shown below.



WARNING!! AVERTISSEMENT!

Use the supplied M12 power cable for all power wiring.

Tout le câblage électrique doit utiliser le câble d'alimentation fourni.

3. Slide tubing over wires, remove the wires and insert it to the fuse holder, crimp it.
4. Connect the **Red** wire to the vehicle's positive power source. Connect both **black** and **white** wires to the vehicle's negative power source.
5. Connect the **Green** wire to the vehicle's ignition switch for the ignition function.

Power cable description:

Color	Symbol
Red	VCC+
Green	Ignition input (optional)
Black	VCC-
White	VCC-

6. Press the power button on the top of the device See *Power Button*.

		Vehicle Installation		Office Test / Evaluation	
		With Ignition	Without Ignition		
Power Mode		Ignition-On mode	AC/DC Mode	AC/DC Mode	AP to switch
Auto-On		Auto-On is ON	Auto-On is ON	Auto-On is OFF	BIOS switch
Trigger On	Ignition On Signal	√	√	X	
	Power Button	X	X	√ (press for 2 sec)	
On Delay Turn Off		0 Second (Default) adjustable by AP		X	
Trigger Off	Ignition Off Signal	√	X	X	
	Power Button	√	√	√	
				First time use: Install all the power cables require for testing. Turn on the power button; the device will automatically boot up in 10 seconds.	

4.4 Vehicle DC Power Supply

The power input voltage range for the FM07M is between 9 to 24 V DC with ignition control.



Warning!/ Avertissement!

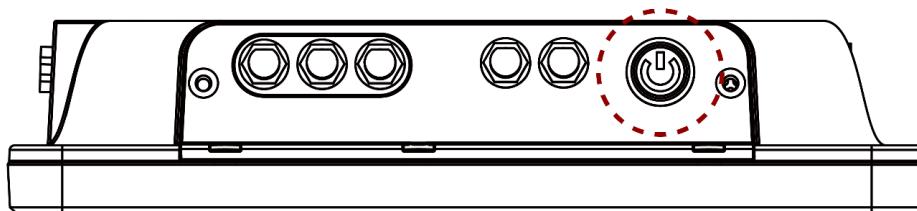
Longer cable length may cause voltage drop resulting in failure to boot the device , if you are unable to boot the device ,please check the line loss of your cable and make sure the power input for power connector of the unit is higher than 9V.

Une longueur de câble plus longue peut provoquer une chute de tension et empêcher le démarrage du périphérique. Si vous ne parvenez pas à démarrer le périphérique, vérifiez la perte de ligne de votre câble et assurez-vous que l'entrée d'alimentation du connecteur d'alimentation de l'unité est supérieure à 9V.

5: Power Control

5.1 Power Button

Power button is located on the top of the device. When the FM07M is connected to the external power and the power button is ON, the device can be powered on.



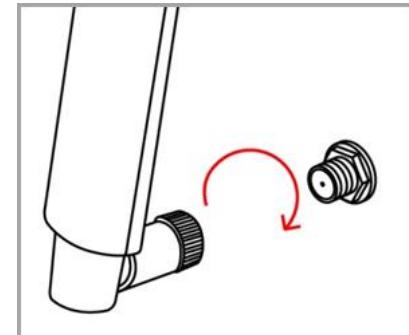
5.2 Ignition Control

The FM07M supports power ignition function.

6: External Vehicle Remote Antenna Installation

The FM07M is equipped with connectors for additional external antenna (WLAN, GPS or WWAN), to install the antenna please perform the following:

1. Remove the rubber cap on the SMA connector before installing the antenna.
2. Align the antenna with the SMA connector and fasten it as following picture.
3. Adjust the position of external antennas.



7: Winset

Winset provides quick access to the tablet's functions and features, such as setting up shortcuts, using camera, powering on/off built-in devices, programming function key, and changing power management.

To launch the Winset, double-tap on **Winset Utility Icon** .Operations and functions on each menu options is explained in detail in the coming section.

Winset Interface:

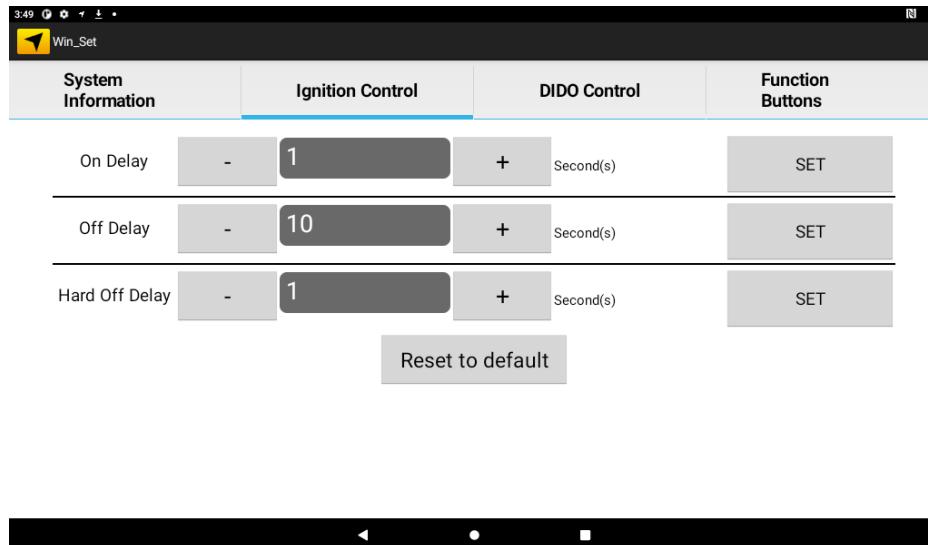
Item	Description
System Information	Provides system information such as Winset version, OS version, serial number and model name. You can also set up password here.
Ignition Control	Setup the timing delay of turning On/ Off/ Hard Off.
DIDO Controller	Set up digital input/ output controller.
Function Buttons	Set up function buttons functions.

7.1 System Information

Kernel	4.14.186
Android	11
OS Version	IM30A_MB100_STD_OT070_R_PT_V220721
Serial Number	
Model Name	IM30A
IMEI	
Enable USB CANBus (if you want to use CANBus, please check the box, but COM1 and COM2 will be unavailable at the same time)	<input type="checkbox"/>



7.2 Ignition Control



Setting	Default Setting	Description
On Delay	1 second	When the system is powered on via ignition key, the system will delay 1 second to power on.
Off Delay	10 seconds	When the system is powered off via ignition key, the system will delay 10 seconds to shut down.
Hard Off Delay	30 seconds	When the system is powered off via ignition key, the device will cut off power after 30 seconds.
Reset to default	-	Resets the ignition settings back to the default.

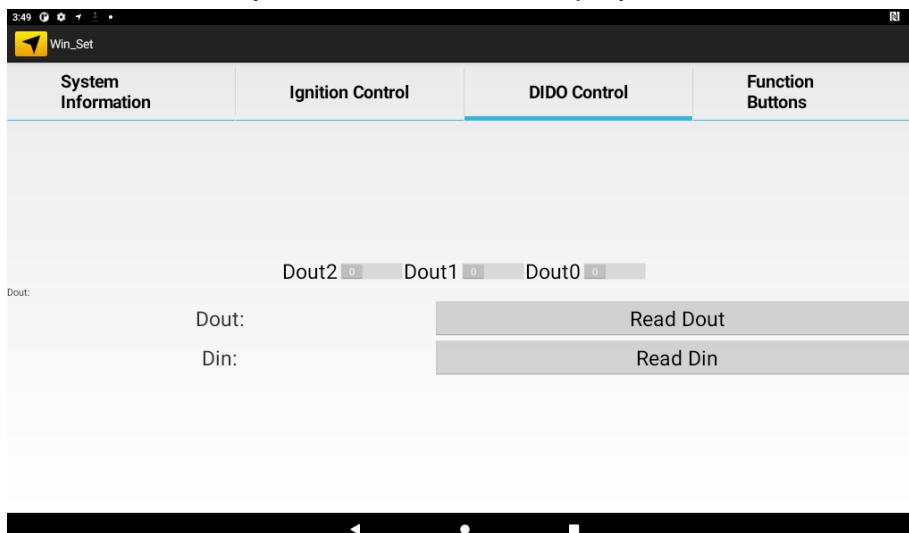


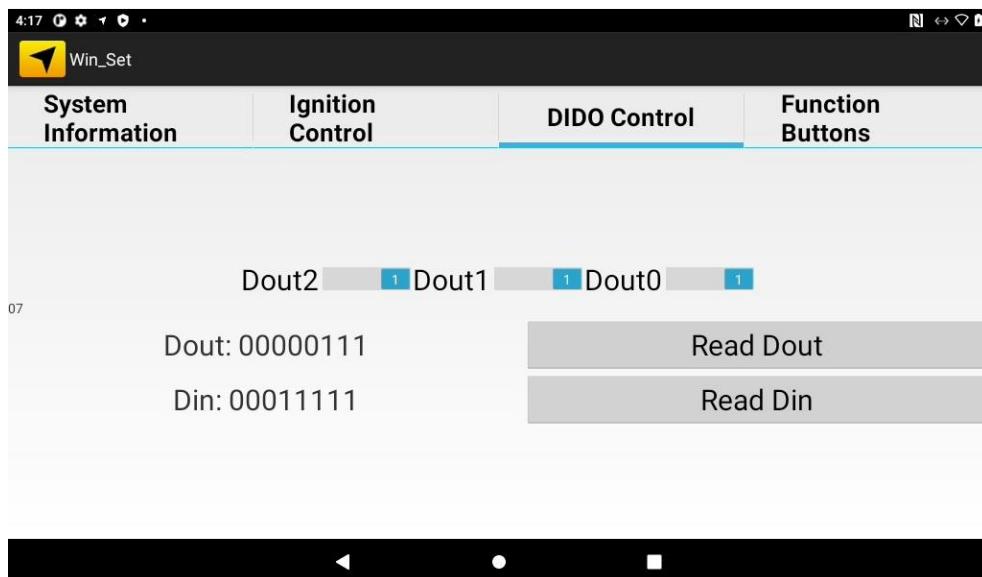
Note: If you don't plan to use the ignition feature connect the green wire to the vehicle's positive power source.

7.3 DIDO Controller

When the DIDO connector is connected to other devices:

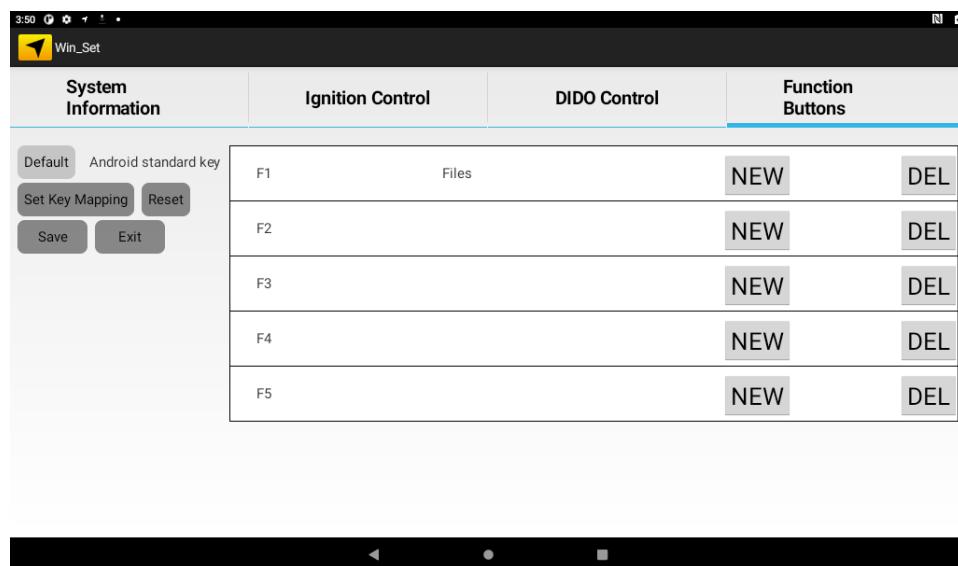
1. Depending on the need, slide the **Dout2**, **Dout1**, and/or **Dout0** to the right to open to show the 1 mark. Then press **Read Dout** to check the connection. If the number 1 is displayed next to **Dout**: there is a power supply. Example, if all **Dout** buttons are slid open, it will show 00000111.
2. When the connected device is powered, the FM07M can receive power. Press **Read Din** to confirm the received electricity. If the number 1 is displayed next to **Din**: it receives electricity.





7.4 Function Buttons

To set function keys open Winset . In **Function Buttons** window of the F1 click **NEW** to open the drop-down menu of function keys. Choose the function key and then select a **Default application** that will be opened by pressing on the function key you have selected. Press **DEL** to reset the function key to previous settings.



Combination keys:

Function Key	Description
F1	Long press to call Winset
F1 + F2	Touch lock
F3 + F4	Volume setting
F4 + F5	Brightness setting

8: Vehicle Mounting

This chapter describes how to mount the FM07M Vehicle Mount Computer. The FM07M is designed to be mounted inside the vehicle with RAM mount or VESA mount.

8.1 Vehicle Mount Instruction

Make sure that the FM07M does not obstruct the driver's vision and ensures safe driving.

The general steps to mount the device on the vehicle are as follows:

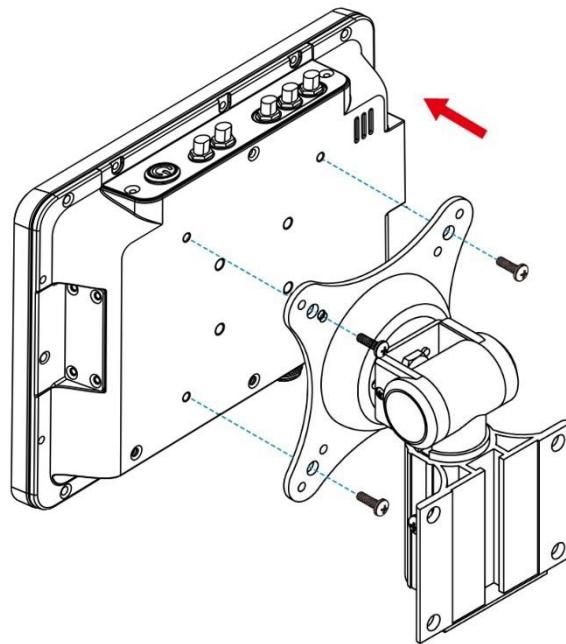
1. Install RAM mount to the vehicle.
2. Adjust the viewing angle of the FM07M.
3. Install antennas if necessary.
4. Connect peripheral devices and cables.
5. Connect vehicle power.
6. Secure all cables.

8.2 VESA Mount Installation

The rear cover of the FM07M supports VESA mount (75 x 75 mm).

VESA Mounting Installation Instructions:

1. Attach the VESA Plate to the rear cover of the FM07M using 4 x M4 mm Phillips screws.
2. Follow instructions provided by VESA mount parts supplier.



8.3 RAM Mount Installation

Winmate recommends using RAM Mounting Parts as part of our device mounting solution. The rear cover of this device is designed to be mounted to RAM Mount solutions, which provides different mounting options to fit any industrial use or vehicle. Please notice that mounting kits are not included in the standard package.

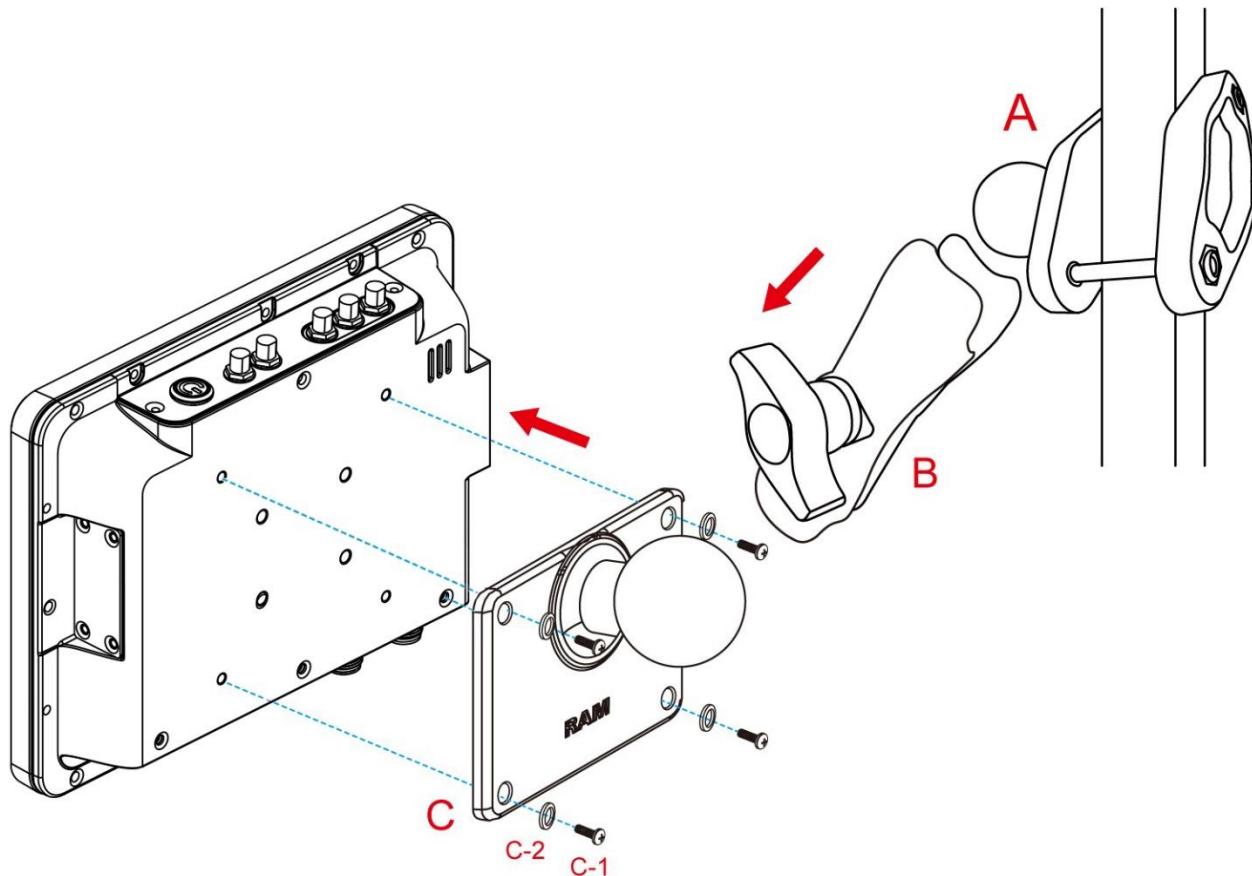
*RAM Base Dimensions: 38.1 x 30 mm
Screw: 4 x M5-0.8x10 mm Phillips screws*

**Important:**

The information below is just a guideline on how you should mount the Winmate device using RAM Mount. To purchase the RAM parts, please follow the RAM Mounts Part and purchase from your preferred retailer.

8.3.1 Mounting 1 – No Drill Solution

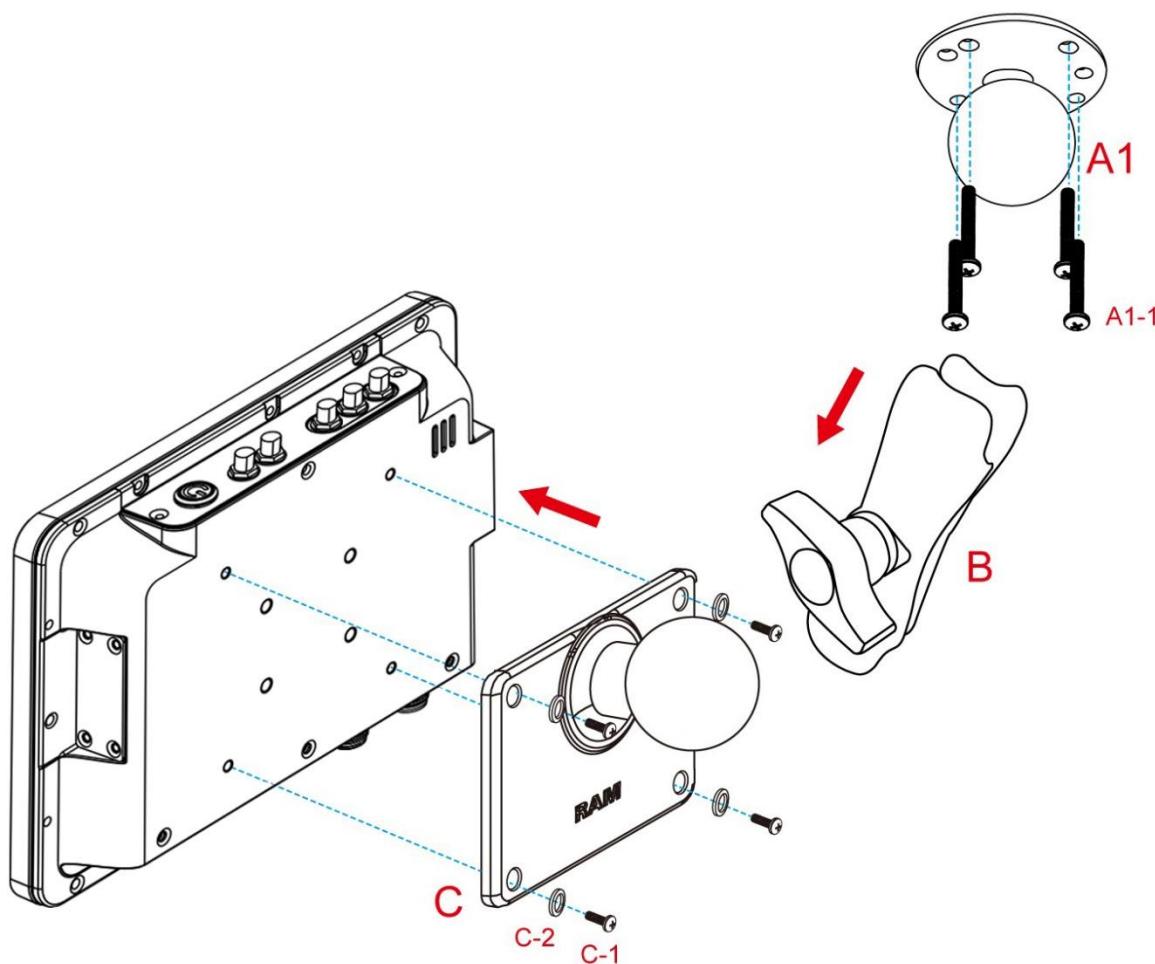
You can order mounting accessories from RAM Mounts.



No	Component	RAM Mount Part Number	Description	QTY
A	RAM Clamp Mounts - on the forklift	RAM-D-247U-4	Clamp base with 2.25" Ball	1
B	RAM Arm	RAM-D-201U	Arm for 2.25" Ball(L:8.375")	1
C	RAM Ball on the device side	RAM-D-2461U	75x75mm VESA with 2.25" Ball	1
C-1	Screw	-	SUS304 M4 x 12mm Screw	4
C-2	Washer	-	M4 Washer	4

8.3.2 Mounting 2 – Drill Solution

You can order mounting accessories from RAM Mounts.



No	Component	RAM Mount Part Number	Description	QTY
A1	RAM round base mounts - on the forklift	RAM-D-202U	3.68" Round Base with 2.25" Ball	1
A1-1	Screw	-	SUS304 M8 x 40mm Screw	4
B	RAM Arm	RAM-D-201U	Arm for 2.25" Ball (Length:8.375")	1
C	RAM Ball on the device side	RAM-D-2461U	75x75mm VESA with 2.25" Ball	1
C-1	Screw	-	SUS304 M4 x 12mm Screw	4
C-2	Washer	-	M4 Washer	4

8.3.3 RAM Mount Assembly

Step 1 Install RAM Clamp to vehicle or forklift

- 1.1 Determine the position for mounting the RAM clamp mount according to RAM Mounts installation guide and specification.
- 1.2 Place the upper clamp with ball on the beam, insert the bolt.
- 1.3 Place the lower clamp below the beam. Align the bolts with the holes in the lower clamp.
- 1.4 Place the nuts and then tighten it.

Step 2 Install RAM Ball base to vehicle dashboard / another surface.

- 2.1 Please make sure that the surface is flat and rigid.
- 2.2 Attach the RAM ball base to the vehicle and fix it using bolt or fasteners.

Step 3 Attach RAM Mount Ball to the device docking.

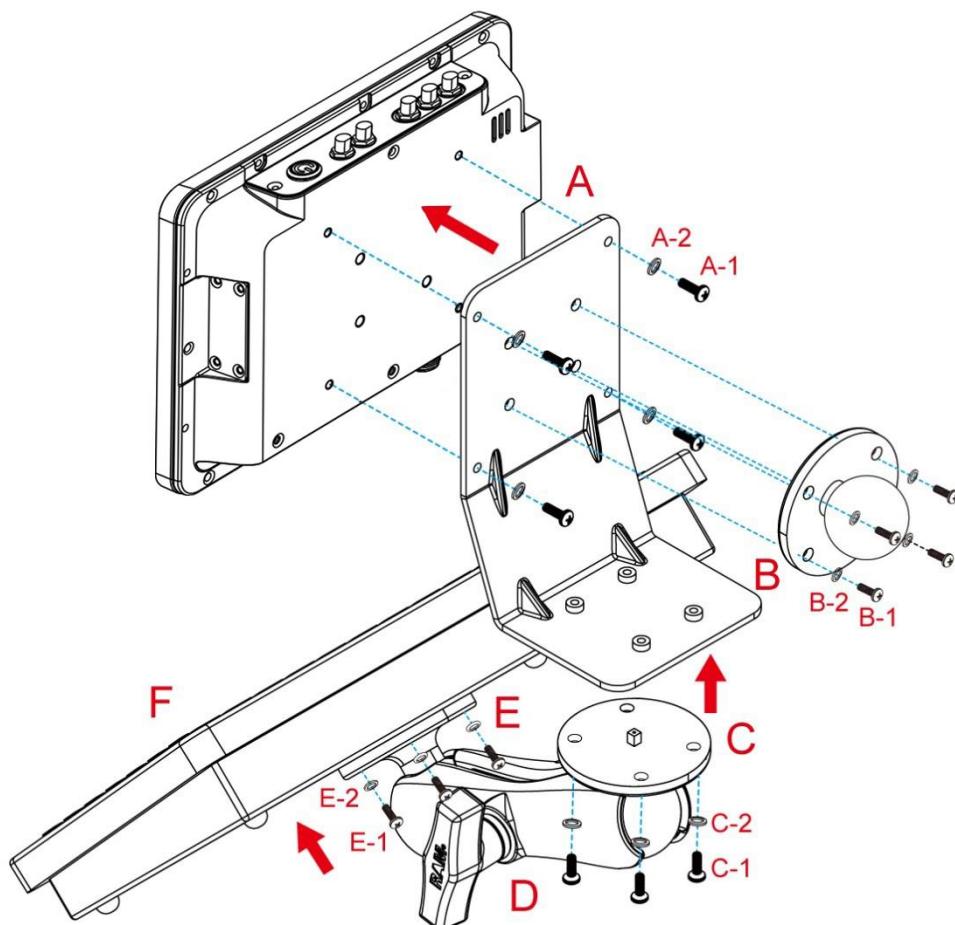
- 3.1 Turn the device off before installing the RAM mount ball.
- 3.2 Locate the VESA mount holes on the back of the device and align it with the holes from RAM Ball base. Fix with four M5 screws.

Step 4 Attach the device to RAM arm.

- 4.1 Insert the RAM arm over the ball on the vehicle RAM mount (shown here).
- 4.2 Insert the ball on the dock into the RAM arm and tighten the knob.

8.3.4 Mounting 3 – Keyboard Mounting Installation

You can order mounting accessories from RAM Mounts.



No	Component	RAM Mount Part Number	Description	QTY
A	Winmate Keyboard Adapter Plate <i>(designed by Winmate)</i>	-	4 VESA Holes on the plate to device and 4 AMPS holes to RAM Ball	1
A-1	Screw	-	SUS304 M4 x 10 mm Screw	4
A-2	Washer	-	M4 Washer	4
B	RAM Ball on the sloped part of the keyboard adapter plate	RAM-202U	2.5" Round Base with 1.5" Ball	1
B-1	Screw	-	SUS304 M5 x 16 mm Screw	4
B-2	Washer	-	M5 Washer	4
C	RAM Ball on the bottom part of the keyboard adapter plate	RAM-202U	2.5" Round Base with 1.5" Ball	1
C-1	Screw	-	SUS304 M5 x 12 mm Screw	4
C-2	Washer	-	M5 Washer	4
D	RAM Arm	RAM-201U	Arm for 1.5" Ball (Length:5.6")	1
E	RAM Ball on the sloped part of the keyboard adapter plate	RAM-202U	2.5" Round Base with 1.5" Ball	1
E-1	Screw	-	SUS304 M5 x 12mm Screw	4
E-2	Washer	-	M5 Washer	4
F	Keyboard	-	-	1

Appendix A: Product Specifications

FM07M- 7-inch Vehicle Mount Computer	
Item	Specifications
Display	
Size / Technology	7"
Resolution	1024 x 600
Viewing Angle	75, 75, 75, 70
Brightness	1000 nit
Contrast Ratio	700:1
Touch	Projected capacitive multi-touch (P-Cap)
System	
Processor	ARM A53 Quad Core 2.0GHz
System Memory	4GB LPDDR4
Storage	32GB eMMC
Operating System	Android 11
WLAN	support
GNSS	GPS/GLONASS
WWAN	4G/ LTE (Optional)
RFID	NFC (Optional)
Interface	
Computer	1 x RS-232 1 x Gigabit ethernet (M12 type) 1 x CANBus/ Digital IO 1 x Power input 9-24V DC with ignition control 1 x SIM card slot (Optional) 1 x SD card slot 2 x USB for DB9 1 x micro USB OTG WLAN/BT antenna GPS antenna (Optional) WWAN antenna (Optional)
Audio	1 x speaker
Control	
Button	1 x Power Button, 5x Function Button (Programmable Function Key Configured by Winset)
Mechanical Specifications	
Dimensions	189.93 x 145.93 x 39.8 mm (7.47 x 5.75 x 1.56 inches)
Cooling System	Fanless design
Weight	1.25 kg
Mounting	RAM Mount, VESA Mount (75x75 mm)
Environment Considerations	
Operating Temperature	-20°C to 60°C (-4° to 140° F)

FM07M- 7-inch Vehicle Mount Computer

Item	Specifications
Humidity	10% to 95% RH, non-condensing
IP Rating	IP65
Shock	MIL-STD-810H Method 516.6 Procedure I
Vibration	MIL-STD-810H Method 514.8 Procedure I
Power Management	
Power Input	9V-24V DC with ignition control
Standards and Certifications	
Safety	CE, FCC

NOTE:

1. Accessories and Integrated Options may vary depending on your configuration. The product shown in this document is a standard model. For diagrams that contain customized or optional I/O, please contact the Winmate Sales Team for more information.
2. All specifications are subject to change without prior notice.

NOTE

NOTE



Winmate Inc.
9F, No.111-6, Shing-De Rd., San-Chung District,
New Taipei City 24158, Taiwan, R.O.C
www.winmate.com

Copyright © 2022 Winmate Inc. All rights reserved.

